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LAND DEVELOPMENT PLAN



CONCORD

NORTH CAROLINA

PREPARED FOR:

CITY OF CONCORD, NORTH CAROLINA

J. W. McEachern, Mayor

BOARD OF ALDERMEN

William M. Brown

E. W. Roberts

L. H. Caldwell

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PLANNING AND ZONING BOARD

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LAND DEVELOPMENT PLAN

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

DESIGN

REPORT NO.

PROJECT

CONCORD

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Responsible for report

May, 1962

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We never know how high we are
Till we are called to rise;
And then, if we are true to plan,
Our statures touch the skies.

Emily Dickinson

INTRODUCTION



INTRODUCTION

The Land Use Survey and Analysis, which has recently been completed for Concord, is a record of past land development. Using this information as a guide, the land development plan will reflect a carefully studied estimate of future land requirements. It will attempt to show how development in Concord should proceed in order to insure a desirable physical environment. Embodied in this proposal will be an explanation for the planned growth of Concord. It will make every effort to fulfill the aspirations of the local citizens, and adhere to the highest standards of health, safety, convenience, economy, and the best possible in urban environment.

A clarification of terms used in this study seems appropriate at the outset. There generally exists some confusion between the terms "land development plan" and "land use map". The following definitions are offered as a means of differentiating between the two terms:

Land Development Plan - a proposal for the future use of land and the structures built upon the land. It embodies an array of principles and the assumptions and reasoning followed in arriving at this proposal. The land development plan is a generalized but scaled presentation of a scheme for the future development of the urban area.

Land Use Map - a map showing how the land and structures on the land are used for urban purposes at a particular time, past or present. The land use map is a factual description of the urban setting, usually as it exists today.

The land development plan which will follow presents a general, but comprehensive, estimate of land use requirements relative to location and amount of land to be reserved for each public and private use. The land development plan can be utilized in the formulation of a master plan. A master plan includes not only systems of use areas but all forms of circulation and their terminal facilities, plus all types of utility requirements. Basically, the land development plan provides an overall plan to guide operational decisions in planning and acts as a basis for rational decisions relating to zoning and subdivision control.

problems, urban renewal programs, and other problems, until the comprehensive plan is consummated. A land development plan is helpful in such areas as land acquisition for public facilities. It provides guidance to private developers of large-scale developments. Both private and public agencies can utilize the land development plan for the installation of utilities and transportation.

Recognizing the role of a land development plan, as differentiated from other types of plans or maps, it will now be possible to proceed with the land development plan report.

OBJECTIVES

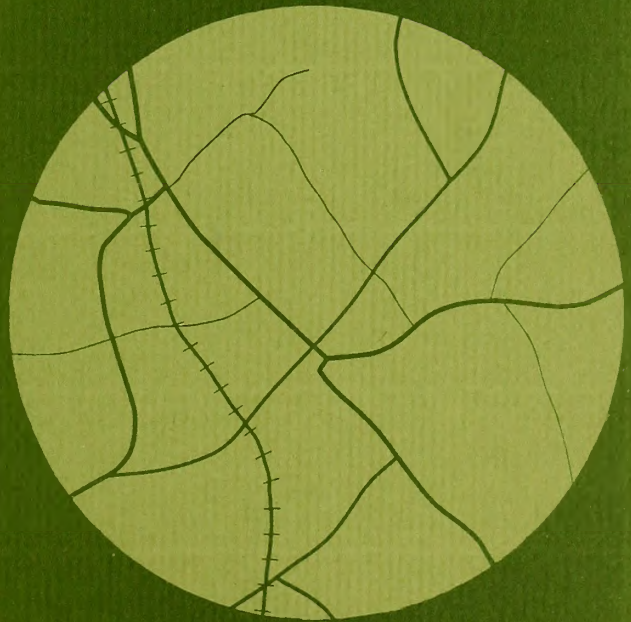
The goals of the land development plan, as outlined below, are general in nature. No attempt has been made to list the goals by priority but it is hoped that they do reflect the values and aspirations of Concord's citizens. As the planning process unfolds there exists the opportunity to reevaluate the original goals both as to substance and priority. Planning is a continuous process and public reaction will provide the impetus for later revisions of objectives.

The following are the objectives of the land development plan for Concord:

- to so order the city's development that it will promote the health, safety, welfare, and convenience of all members of the community;
- to express the policies which will achieve the goals and aspirations of the community;
- to create a plan which will be responsive to orderly growth and change;
- to relate the uses of land so that efficient, economical and orderly development will result for residential, commercial and industrial growth;
- to further the development of the social, cultural, spiritual, aesthetic, and economic values of the community;
- to observe the highest standards in housing and community facilities;
- to provide adequate recreational facilities and preserve open space.

- to provide for the efficient movement of people and goods through a well-coordinated circulation system;
- to coordinate the growth of the city with the surrounding areas.

EXISTING CONDITIONS



CHAPTER I

EXISTING CONDITIONS

A recapitulation of data from the initial two reports which have been completed will assist in understanding the economy, population and land use characteristics of Concord. The first of these reports was the "Population and Economy Study", published in August, 1964, by the Division of Community Planning, Department of Conservation and Development. In May, 1965, the "Land Use Survey and Analysis" was completed by the above agency. It is from these two studies that a framework is established whereby a land development plan can evolve. A brief summary of the most pertinent information from these two reports follows:

POPULATION

The population growth for Concord has been constant throughout the Twentieth Century. However, Concord has not grown proportionately to the State during this period and except for the period of 1950-1960 it did not keep pace with the growth of Cabarrus County. Population projections show that Concord will grow from 17,799 persons in 1960 to 19,000 in 1970, and to roughly 20,650 by 1980. Over 50 per cent of Concord's population has been female since 1940 and Cabarrus County's population since 1950 has shown a female majority.

INCOME

In 1949, 11 per cent of the families in Concord earned less than \$1,000 and 49.5 per cent had annual incomes under \$3,000. Only 42.2 per cent had family incomes between \$3,000 to \$7,000 a year. By 1959 the percentage of families with incomes under \$1,000 had dropped to 6.6 per cent and families with annual incomes of less than \$3,000 decreased to 24.5 per cent. However, the annual family income range from \$3,000 to \$7,000 increased by only 4.8 per cent. A comparison of the median family income for Concord reveals that with \$5,028 it exceeded Urban North Carolina with \$4,843 but was substantially below the \$6,166 for Urban United States.

CHAPTER 1

THE CANADIAN ECONOMY

A characteristic of the Canadian economy is its size. It is the second largest in the world, with a population of over 30 million and a gross domestic product of over \$100 billion. The Canadian economy is a mix of private and public enterprise, with a strong emphasis on resource-based industries. The government plays a significant role in the economy, particularly in the areas of health, education, and social services. The Canadian economy is also characterized by its high level of technological innovation and its strong ties to the United States.

POPULATION

The population of Canada is estimated to be around 30 million. It is a diverse population, with people from many different ethnic backgrounds. The majority of the population lives in the eastern half of the country, particularly in the Great Lakes region. The Canadian population is also characterized by its high level of education and its strong emphasis on social services. The government provides a wide range of social services, including health care, education, and social housing.

INCOME

In 1990, the average income per person in Canada was around \$10,000. This is a relatively high income, particularly when compared to other countries in the world. The Canadian economy is also characterized by its high level of technological innovation and its strong ties to the United States. The government plays a significant role in the economy, particularly in the areas of health, education, and social services. The Canadian economy is also characterized by its high level of technological innovation and its strong ties to the United States.

EDUCATION

The median school years completed in Concord is only 9.3 years, almost two years less than Urban United States and 11.1 years, and one year less than Urban North Carolina with 10.4 years. Only 33.3 per cent of the adults have completed high school and 7.2 per cent have completed college. In comparison, 44.2 per cent of the adults in Urban United States have completed high school and 8.9 per cent have completed college. In Urban North Carolina 40.7 per cent of the adults have completed high school and 9.8 per cent have completed college. It also should be noted that 45.5 per cent of Concord's population have only 1 to 8 years of education and 2.9 per cent have none.

ECONOMY

The economy of Concord has an overwhelming dependence on the textile industry. During the period of 1950-1960 textile employment decreased nationally by 22.3 per cent and locally by 15.9 per cent. It was projected that employment would continue to decline proportionately in the future. However, in 1964 Congress had a one-price cotton bill signed into law and current figures from the Department of Labor indicate that as of 1964 there has been a slight gain in textile employment over 1950. In 1950 textiles provided 88.5 per cent of all basic employment and 83.4 per cent in 1960.

Annual wages per person have been increasing since 1958 and average monthly employment has also been increasing for a like period of time.

LABOR FORCE

In 1960 the Concord labor force contained 8,262 persons of which 4,544 were males and 3,718 females. The textile industry provides an unusually high rate of employment opportunity for women and this accounts for the labor force having 45 per cent females. There is a high percentage of out-migration by the younger group of the labor force. More diversified employment outside of Concord probably accounts for this out-migration. The net result is a labor force which is older and a siphoning off of the best educated, the most educable, and the most productive of the labor force.

EMPLOYMENT AND UNEMPLOYMENT

Assuming a continuation of past trends, total employment in Concord is expected to increase 22.6 per cent by 1980, representing an addition of approximately 1,800 new jobs outside of the textile industry. It was projected in 1950 that there would be a decline in employment for the textile industry of 39.6 per cent, or a loss of 1,100 employees. However, as previously mentioned, this loss did not materialize and thus results in a considerably brighter future for employment in Concord.

Generally, unemployment in Cabarrus County was significantly lower in 1963 than in 1962. Only during the months of July and August did the unemployment levels of 1963 rise above those of 1962. Were it not for the large upturn in unemployment during midsummer 1963, employment in Concord would appear to be reasonably stable. However, the fact that unemployment did rise rapidly at this time indicates seasonal employment and a need for more diversification of the industrial base.

EXISTING LAND USE

The land use survey that was conducted in Concord during September, 1964, produced the following statistical data. Map 1 graphically presents the existing land use for Concord.

VACANT LAND

Within the corporate limits of Concord there are 981 acres of vacant land, or 30 per cent of the total acreage which comprises 3,263 acres. The one-mile perimeter area comprises 9,588 acres, and 7,409 (or 77.2 per cent) acres are presently vacant. Thus, there are 8,390 acres which are vacant in the entire planning area, or 65.2 per cent of all acreage involved.

Our population projections show that Concord will have a population gain of approximately 2,850 persons by 1980 and 4,080 for the total planning area. Therefore, 8,390 acres are presently available for this projected population increase. Obviously this will far exceed future requirements. However, several factors have qualified the prospects of developing some of this vacant land.

There has been an intermingling of incompatible land uses and the net result has been a waste of land. In many cases the use of land has been excessive, while in others the allocation of land has been below standards. Poor land use relationships have caused blight in many areas and discouraged development in proximate areas. Consequently, large vacant areas are wasted between the blighted areas and the locations of "spot development".

RESIDENTIAL

Residential areas comprise the major share of developed area in Concord. They account for 2,198 acres, or 49.2 per cent of the total developed area of 4,460 acres.

Table 1 is a summary of housing within the corporate limits and lists the number of units according to planning areas and shows the percentage of substandard housing shown for each area.

CONCORD

Planning Area

3000' 0 3000'

Scale in Feet

N

GENERALIZED
EXISTING LAND USE



TABLE 1 SUBSTANDARD HOUSING UNITS - CORPORATE LIMITS

Area	Number Housing Units	Per Cent Sub- Standard
4	1,214	55.5
2	673	24.6
5	602	1.8
7	593	14.8
1	522	24.9
6	503	14.7
8	411	4.3
3	319	23.1
CBD	11	63.6

The most important deduction to be made from the above table is that the planning unit with the largest number of residences also has the highest percentage of blight. The CBD is not considered in this evaluation since its total number of housing units is so insignificant. Unit 4 falls within the classification of an eligible area for urban renewal as defined by Federal standards. A neighborhood with over 50 per cent substandard housing is considered as beyond rehabilitation or conservation techniques alone and requires an urban renewal effort.

Factors contributing to residential blight are strip commercial and industrial development, "spotty" residential development, poor traffic patterns, insufficient buffering of neighborhood boundaries, and a generally poor land use relationship.

The four outer fringe planning areas have a total acreage of 9,588 acres, of which 838 acres, or 8.7 per cent of the total, are devoted to residential use. Since the total outer fringe planning areas comprise 9,588 acres, of which only 2,178 acres are developed (or 22.7 per cent of the total), it is evident that great potential exists for residential growth within these boundaries.

Table 2 summarizes the number of housing units and the percentage of substandard housing in each area.

TABLE 2 SUBSTANDARD HOUSING UNITS - FRINGE AREA

Area	Number Housing Units	Per Cent Sub- Standard
A	1,243	30.0
B	643	34.5
C	226	15.4
D	203	20.6

The most important observation to be made from the data contained in Table 2 is that substandard housing has been allowed to develop originally. A lack of building controls has resulted in a rapid deterioration of housing in this area. It should be noted that the two areas most fully developed also have the highest percentage of substandard housing. Basically, the reasons for blight in these areas are the same as for the corporate limit areas. The only exceptions are that an excessive amount of land has been utilized for residential sites and a considerable portion of some areas are unfit for residential development because of flooding conditions.

COMMERCIAL

Commercial activities are considered in two major categories for the purpose of this study. The total acreage for these two major divisions are shown in Table 3.

TABLE 3 COMMERCIAL USE OF LAND

	Acres	Total
<u>Service</u>		
Consumer	97.5	
Professional	24.4	
Business	<u>11.3</u>	133.2
<u>Business</u>		
Retail Trade	87.7	
Wholesale Trade	<u>39.9</u>	<u>127.6</u>
Grand Total		260.8

The commercial acreage as a percentage of the total developed planning area is 5.8 per cent. A crude rule of thumb procedure as employed in the preliminary land use plan for estimating the amount of land needed for commercial purposes in cities is 3.32 per cent of the developed area.* Obviously, there has been an over-development of commercial land in Concord. The major cause for this condition is the large strip commercial development that has taken place within the most highly developed portions of the planning area. Consequently, an imbalance of various commercial activities has developed and a lack of orienting them to individual neighborhoods has transpired. At a result of these factors, traffic problems have developed along with parking deficiencies and devaluation of adjoining residential property.

SOCIAL AND CULTURAL

The total acreage devoted to these uses is 322.5 acres. This category is divided into two major categories. Personal development includes establishments of education, religion, and recreation on a non-profit basis. Health and welfare includes hospitals and institutional establishments.

The allocation of these services has created a disparity as they relate to individual neighborhoods and areas. They are neither geared to relative populations or areas. Some have an overabundance, others show a deficiency, while some lack facilities entirely.

PRODUCTION

The total acreage devoted to manufacturing is 178.9 acres. Included in this category are those concerns engaged in the mechanical or chemical transformation of organic or inorganic substances into new products, whether the products are put back into the manufacturing process or are sold at wholesale or retail. Also included are establishments with a manufacturing nature or character which supply the general needs of a semi-intangible nature to the public. Such services as construction, utilities, and other miscellaneous services are included.

*Harland Bartholomew, Land Uses in American Cities (Cambridge: Howard University Press, 1955), Page 47.

Production facilities have been allowed to develop along many major roads which act as neighborhood boundaries and in some instances have intermingled with residential areas. As a consequence, an increasing number of residential acres are falling victim to blight. This has proven a liability to industry as well as residential property.

Manufacturing services are poorly located. They are poorly related to their clients and have added to the stifling effects of strip commercial. Travel through large portions of the city to reach their customers has caused an undue amount of traffic congestion. Miscellaneous services, which include junk yards, sheet metal shops, welding shops, dry cleaning plants, etc., are having a deteriorating effect by their indiscriminate locations. Some have added to the strip commercial complex, others have intermingled in residential areas, and unsightly junk yards have used little or no screening devices.

ROADS

This classification has been divided into streets and highways, plus railroads. Total acreage includes rights-of-way as defined in the land use survey analysis.

Streets and highways comprise 1,223.2 acres and railroads 82.5 acres, making a combined total of 1,305.7 acres, or 29.2 per cent of the developed area.

The major problems concerning the railroad are that it crosses five major streets within the planning area and only one street has a grade separation crossing. This condition creates a serious problem for the flow of traffic into the CBD and to industrial plants east of the railroad.

U. S. Highways 29 and 601 present some serious traffic problems. Highway 601 carries traffic in and out of the heart of Concord. The highway is lined with strip commercial development and a lack of off-street parking makes on-street parking mandatory. This further adds to the traffic congestion since the highway is only two lanes wide for each direction of traffic. At the northern edge of the city a bottleneck is created where Highways 601 and 29 intersect. Highway 29 carries

heavy traffic to and from Kannapolis and Charlotte. Further complicating the traffic is the fact that Cabarrus County Hospital is located at this intersection and both services and discharges a large amount of traffic.

Within the CBD both Union and Depot Streets intersect. During the course of these streets a tremendous amount of traffic is collected and brought through the heart of the business section. No loop street exists to bypass the CBD.

The City is sorely in need of a street renaming program, since there are ninety-three street name duplications. The street signs themselves are obliterated in many cases, and in other instances are nonexistent. Street sign standards are insufficient in height, causing parked or moving vehicles to block the view of street names. A house renumbering system should accompany the street renaming program.

Rights-of-way for city streets are not a matter of record and a survey should be made to correct this situation. The aforementioned road problems are by no means all inclusive. Other difficulties will be alluded to as this study progresses.

CENTRAL BUSINESS DISTRICT

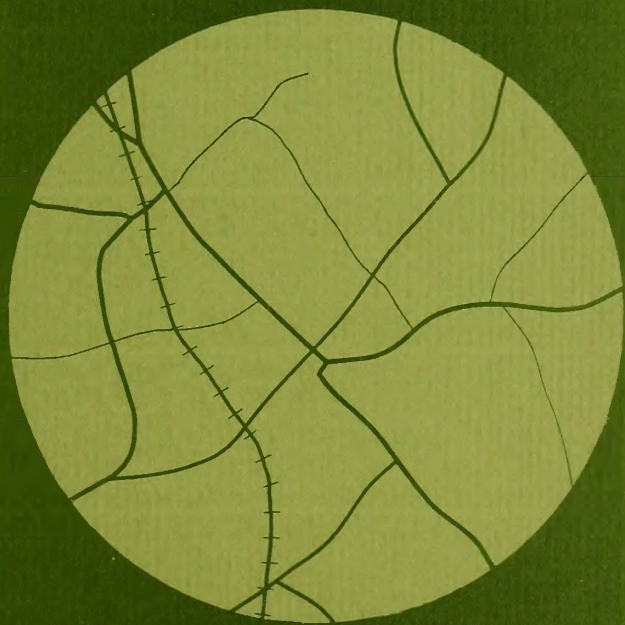
The total area of Concord's CBD is 56.6 acres. Streets comprise 9.3 acres and residences occupy 2.4 acres.

An enlargement of the CBD is necessary and also an improved definition of the area. Since seven of the eleven housing units within the CBD are in need of major repair, it would be advisable to purchase the property to enlarge the business area. A rerouting of streets would aid in defining the CBD and also correct some of the traffic problems. There is a lack of off-street parking and an insufficient amount of green area.

The functionally obsolete County Building should be replaced and adequate parking facilities provided. The fire station should be relocated from the congestion of the CBD. An additional fire station should be erected to compensate for the growth and shift of population.

Wholesale trade which occupies 3.3 acres of the CBD would be better located on the periphery of the business district. Approximately one acre of manufacturing and manufacturing services could be more advantageously situated in proximity to one another outside the CBD.

FUTURE QUALITATIVE LAND USE REQUIREMENTS



CHAPTER II

FUTURE QUALITATIVE LAND USE REQUIREMENTS

Two factors must be considered in determining future land use requirements. The first factor concerns itself with the qualitative aspects of land use relationships and the desirable locational characteristics involved for each land use considered. Although there are no standards which are generally applicable in determining the area of land required for each specific land use, there are minimum and maximum estimates which can be utilized for each land use. The flexibility of these estimates allows individual communities to vary the suggested standards to their requirements.

Estimates of space requirements are largely based on current needs and calculated to conform with legal requirements of zoning, subdivision, and housing ordinances. Accessory uses are included in the estimates and consider such needs as off-street parking, off-street loading, and landscaping. A generous allowance of land area is allowed as a safety factor. Although population projections and economic forecasts are of vital concern in determining future land use requirements, there always remains the possibility of unforeseen growth. A safety factor also allows for a discounting of land area which may prove to be unuseable for its allotted use.

For the purposes of this general land development plan the land use classification categories have been divided into seven classifications. These seven classifications will now be considered according to their individual general qualitative requirements.

RESIDENTIAL

Locational characteristics for this type of land use should possess the following qualitative attributes:

- Should be small enough so as not to destroy the identity of areas occupied by people of similar economic and social backgrounds. Controlling the land area permits development of the neighborhood concept by utilizing the elementary school as the nucleus and also allows for more effective planning of recreation areas, shopping facilities and streets.

- Topography should have enough contour to give the land character and yet provide good drainage. However, terrain should not be so rugged that excessive costs are incurred when utilities and roads are installed.
- Residential areas should have easy accessibility to employment, shopping, and cultural activities.
- Protection should be afforded to the area from heavy traffic and other incompatible land uses.
- Area should be of sufficient size so that desirable residential densities can be maintained.
- Where a community has a limited amount of level land available, it should not be preempted for residential use to the detriment of other uses that require level land.

COMMERCIAL

The commercial land use in a city or town falls roughly into three major categories. The central business district is the retail core of the area and also the financial and administrative center. Shopping centers are the second category and incorporate the subcategories of neighborhood, community and regional centers. Strip or ribbon commercial is the third category. These categories will be discussed in their respective order.

A. Central Business District

- Should have adequate ingress and egress for traffic. A loop street around the CBD should be provided to relieve traffic congestion.
- Provision for off-street parking and off-street loading.
- Integrate civic and private building.
- Provide adequate land for pedestrian ways and utilize green areas as a means of a buffering zone for adjoining incompatible land uses. This can also act as a means of beautifying the CBD.
- Correlate central business district activities with those on the periphery.

B. Shopping Centers

I. Neighborhood Centers

These centers provide convenience goods such as foods, drugs, and personal services. Usually the major store is a supermarket. They service the immediate neighborhood.

II. Community Centers

A center of this type provides convenience goods, clothing, hardware, and household appliances. It services a community which comprises several neighborhoods.

III. Regional Centers

Comparative shopping items are furnished by this type of center. In addition to general merchandise they feature apparel, furniture, and home furnishings. The focal point of the center is a department store.

The following are qualities which all three centers should possess:

- A site of sufficient land area to serve the particular type of center involved.
- Access should be readily available by means of major thoroughfares.
- Buildings should be grouped so as to operate as one functional unit. Free-standing commercial structures are not desirable.
- On-site parking should be provided and entrances and exits should be constructed so as not to cause traffic congestion. Marked parking spaces should be provided within easy walking distances of the stores.
- Truck traffic and loading facilities should be separated from customer traffic.
- Foot traffic should be separated from vehicular traffic. Protection from the elements should be afforded customers while shopping.
- Landscaping should be provided and proper buffer zones established so that surrounding land uses are not jeopardized.

C. Strip Commercial

This type of commercial activity is usually a variety of commercial enterprises located on major arteries in a community. Sites are normally inadequate and have free-standing units which fail to form an integrated functional whole. These types of commercial activities should possess the following attributes:

- They should provide only those services absolutely essential to the highway public.
- Sites should be of sufficient size to provide off-street parking and have entrances and exits which do not impede traffic on the major traffic artery.

- Clustering of these units is preferable to intermingling them with incompatible uses.
- Buffer zones should be provided to protect neighboring land uses. Landscaping can also assist in making these enterprises more attractive.

INDUSTRIAL

A city must first decide whether it desires industry within its boundaries. This is largely determined by whether the city is adaptable to industry. Should a city decide to industrialize it must then make a decision as to what areas are suitable for this type of land use. The determination of this decision should be based on the following criteria:

1. Sites should be located on land with a slope of preferably not more than five per cent.
2. Sites should be easily accessible for plant workers. Locations near interconnecting major highways is imperative. This provides access for employees as well as transportation facilities for trucking. Certain types of industries require locations that have railroads, waterways, or airports and sometimes a combination of these three.
3. Utilities of sufficient capacity and type are essential.
4. Land area should incorporate adequate off-street parking and sufficient allowance for future plant expansion.
5. Landscaping and buffer zones should be provided.
6. Prevailing winds should be considered so dissipation of smoke and odors can be accomplished with as little inconvenience as possible.
7. Off-street loading should be provided so as not to congest traffic on the surrounding streets.

CIRCULATION

For the purpose of this report streets are divided into four categories. A brief definition of each type street follows and the major qualitative features are described.

A. Local Streets

This category of streets comprises those which are designed only to service the traffic volume for the local area involved. These areas can be either residential, commercial or industrial. The streets are not meant to service any type of traffic collection.

Desirable qualities for these streets are as follows:

1. The major purpose should be to provide access to property abutting the public right-of-way for both pedestrian and vehicular traffic.
2. Local streets should not carry through traffic. Heavy commercial vehicles should be prohibited from this type of street except in commercial and industrial zones.
3. Easements should be provided for all necessary utilities.
4. Streets should not be unduly long and cross streets and intersections should not have acute angles.
5. In commercial developments greater widths are necessary for local and land service streets.
6. Streets for industrial developments must be built according to whether truck trailers are maneuvered on or off the streets.

B. Collector Streets

The major function of the collector street is to bring traffic from local residential streets to arterials. Desirable attributes for these type streets are as follows:

1. Land access is a secondary function of collectors and the design and operation of this type street should reflect the traffic emphasis.
2. Parking should be prohibited and residential buildings should not face onto, or have driveways entering, the collector street.
3. Adequate space should be provided for easements or the location of utilities.
4. The cross section of collector streets must not be narrower than any of the local streets entering it.
5. Local streets should not cross the collector directly.
6. Planting should be held back from the street and sidewalks should be separated from the pavement by a wide tree lawn or esplanade. Sight distances at intersections should be adequate and no visual barriers near the corners.
7. A spacing of collector streets at approximately one-half mile intervals is desirable. Collectors should not be a continuous system since there would be a tendency to use them as arterials and thus fail to keep through traffic out.

C. Arterials

The first and most important function of arterials is to move automobiles, trucks and buses. Land access should be a secondary function of arterials. Arterials should conform to the following standards:

1. Adequate space should be provided for easements or the location of utilities, and communication.
2. Parking should be prohibited.
3. Arterials should be designed primarily for traffic.
4. Median strips should be provided and access to abutting property provided by service roads.
5. Rights-of-way should be sufficiently wide to provide grade separations at intersections requiring them.

D. Freeways

Freeways are high-speed roads that are access-free and have grade separation interchanges. The freeway has one sole function which is to carry traffic. It should possess the following qualities:

1. Freeways should not be used as sites for public utilities or communication lines.
2. Construction of freeways close to the central business district should be avoided due to higher land costs and also because utility relocations and grade separations are more frequent.
3. Freeways should be designed to carry high-speed traffic.
4. The purpose of a freeway is to connect cities rather than neighborhoods.

PUBLIC UTILITIES

Public utilities are provided in response to present and future urban development. The qualitative aspects of public utilities changes with increasing urbanization. Examples of these changes would be conversion from septic tanks to a sewerage system, wells to a municipal water supply, and many others. Four major categories of public utilities will be discussed and desirable qualitative features of each will be outlined.

A. Water Supply

1. Water should be free from bacteriological or other contamination.
2. It should be clear, colorless, odorless, and pleasant to the taste and contain a moderate amount of soluble mineral substances.
3. Treatment and periodic bacteriological analyses of the water should be conducted by State health agencies.
4. Where fluoridation is desired it should be done in conjunction with water treatment.
5. Catchment areas and reservoirs should be reserved well in advance of regional development.
6. A water distribution system should assure continuity of service.

B. Sanitary and Storm Sewers

1. Sewerage should be considered where land is divided into lots of less than one acre.
2. Main sewers should be built on a projected population of the next twenty-five years.
3. It is desirable to have both sanitary and storm sewers and not a "combined system".
4. In extensive flat areas the flow should not be relied on by gravity alone but should be supplemented by pumping stations.
5. Cooperation between governmental jurisdictions is desirable where gravity flow is influenced by the topography of several areas.
6. A long-range solution to sewage collection and treatment should be established as a policy for urban fringe areas where new subdivisions are eminent. This is especially true where no sewer system exists.
7. Area and shape of watershed, rainfall intensity, ground slope, and character of ground cover must be considered in designing a system of storm sewers.
8. A system of storm sewers should be based on a probable pattern of development over the next twenty-five years.
9. Storm sewers should be designed based on the fact that infrequent storms may result in flooding.

C. Electric Power

1. Electric generating plants should be confined to industrial districts.
2. Along streets that are to be paved it is desirable to install house connections from underground utility lines to the curb before the street is surfaced.
3. Joint use of facilities by several utilities is desirable in both streets and easements.
4. Ideally conductors should be placed in underground conduits. Adequate records should be kept of all underground facilities.

D. Refuse Disposal

1. Kinds and amounts of refuse to be collected should determine the type of refuse disposal unit utilized.
2. Careful selection of disposal sites will help in minimizing land use conflicts.

E. Gas System

1. Gas lines should be laid with a gradient of at least 0.25 per cent to provide drainage for water that condenses within the lines.
2. Gas manufacturing plants and storage facilities should be confined to heavy industrial districts.
3. Safety should be a principal goal in the design of the plants and storage facilities.

F. Telephone Service

1. Conductors should be placed in underground conduits whenever possible.
2. Both in streets and easements the joint use of facilities by several utilities is desirable.
3. Telephone exchange buildings are permissible in most zoning districts. Related operations such as offices for public business, storage of materials, and truck or repair facilities should be excluded from the telephone exchange site.

RECREATION AND OPEN SPACE

This category covers land which includes playgrounds, playfields, parks, and other open spaces which serve as areas in which people can

conduct active and passive recreation activities. These areas also serve as buffer zones for incompatible land uses and aid in breaking the monotony of a densely populated area. The following concept should be adhered to in planning recreational areas:

1. The topography of the site should fit the facility to be developed.
2. The site should be large enough and properly located for efficient operation and maintenance. It should be quiet, clean, safe, and protected from strong winds, heavy traffic and uncongenial development.
3. Sites acquired in developed areas should entail the least demolition of buildings and dislocation of families.
4. Active recreation areas should be separated according to the age groups that will use them and easily accessible to the people who will be using them.
5. Recreational facilities should be combined with school facilities to serve as educational and recreational centers for neighborhoods, or groups of neighborhoods.

PUBLIC BUILDINGS

This category includes those types of public buildings used for the conduct of government and the furnishing of essential public services. These may be constructed and operated by municipal, county, city, state, or federal government, or by a semi-public agency. Some of the most important qualitative requirements are as follows:

1. Locations should be where they function effectively and yet fit into the master plan.
2. Decision should be made as to whether buildings are to be free-standing or grouped.
3. Central type buildings should be easily accessible from all parts of the city.
4. The design layout should take into account the future growth of the services furnished, adequate parking, employee facilities, general utilities, public comfort, and aesthetic qualities.

The foregoing discussion of the qualitative aspects of land use relationships and locational factors should not be considered as exhaustive of all factors which might be considered. However, as the land development plan unfolds there will be other qualitative and locational factors discussed.

FUTURE QUANTITATIVE LAND USE REQUIREMENTS



CHAPTER III

FUTURE QUANTITATIVE LAND USE REQUIREMENTS

In order to estimate the future land use space requirements for Concord, it is necessary to evaluate the present land use allocation and compare it to desirable standards according to each land use category. This method will then establish the deficiencies or over-allocation for each land use category. The land use requirements for the projected population gain is added to the present land use deficiencies and the net result is the acreage requirement for the planning period.

RESIDENTIAL

The projected requirements for residential land during the planning period of the next twenty years, as a result of population growth, is predicated on two major principles. First, the projected increase in population for the planning area and second, the amount of land necessary to satisfy the residential needs as a result of this growth.

The corporate limits of Concord is expected to have a population increase of 2,850 persons by 1980. In essence, this means that with an average family size of 3.7 persons, there exists 981 acres of land within the corporate limits to satisfy the needs of 770 families. Since the overall residential density for the city is 3.7 dwelling units per acre there appears to be no over-crowding on a city-wide basis. In single-family areas a density of between five and ten dwelling units per acre is adequate. The residential pattern of Concord has been the use of larger than average lot sizes for homes and there is nothing to indicate that this course will be varied. The city-wide average acreage per dwelling unit in Concord is 0.27 acres. Therefore, 770 additional dwelling units will require 208 additional acres.

The outer fringe planning area has a total of 2,361 dwelling units encompassing 839 acres. This means that the average acreage for each dwelling unit in this area is 0.35 acres per dwelling. Since the population growth for Cabarrus County was 6.8 per cent for 1950-1960, this percentage will be used on a "straight line" projection for the plan-

ning period. There were 8,736 persons in the fringe areas as of 1960. With a constant growth rate of 6.8 per cent there will be an increase of 1,230 persons by 1980. An assumption is made that the average acreage per dwelling will drop in the fringe area to approximately 0.30 acres per dwelling through subdivision regulations which will be instituted within the next two years. This would mean that 333 dwelling units will be required, or a total of 100 acres. With a total of 7,409 acres of vacant land in the fringe planning area, there obviously is no shortage of land.

For the total planning area there is a need for 308 acres of residential land to accommodate 1,107 dwelling units, or a population gain of 4,080 persons.

The land use survey and analysis of Concord revealed that Study Area 4 should be considered an urban renewal area. Slightly more than 55 per cent of the dwelling units were categorized as either major repair or dilapidated. This would then require the demolition of 674 dwelling units within the area. However, this figure will have to be expanded since additional units are generally razed in such projects. Certain assumptions must be made in determining land use space requirement deficiencies. The first of these assumptions is that roughly 75 per cent of the dwelling units will have to be demolished in Study Area 4 in order to satisfactorily implement a residential urban renewal project. This would then mean that approximately 912 dwelling units would have to be razed. It is further assumed that public housing will comprise approximately 50 per cent of the new dwelling units. Assuming that a four-family unit would occupy a lot size of 150 feet wide by 200 feet deep there would then be 2.9 dwelling units per acre, or 11.6 families per acre. To accommodate one-half of the 912 dwelling units which are demolished would require approximately 38 acres.

Since there are 92.7 acres of vacant land in Study Area 4 there should be no problem as to relocating families. The renewal project would be done in phases and not require families to leave their present neighborhood.

The remaining 456 families in the neighborhood presently have homes situated on lot sizes averaging approximately 35 feet by 75 feet. Since these are abnormally small lots for single residences, it is felt that new homes should have lot sizes of 50 feet by 100 feet. Approximately twice the lot size area would then be required for 456 families, or an additional one and one-half acres.

Since the neighborhood density would be increased through public housing, there would be enough land conserved to more than equal the additional one and one-half acres required for larger lot sizes occupied by new single residences. Thus, it can be concluded that no residential land use deficiency will exist in implementing an urban renewal project.

In addition to the major repair and dilapidated residences in Study Area 4, there are 1,193 additional structures in the planning area that will require replacement within the next twenty years. Maintaining the same residential density of 3.7 families per acre, there would be an overall requirement of 340 acres to replace these dwelling units. Since the preponderance of residential development is taking place in the vacant land within the one-mile fringe area it is a safe assumption that one-half, or 596 of the replaced dwelling units will be in this area. The remaining half will occupy areas vacated by demolition. The total acreage needed for 596 relocated residences would total 161 acres.

The 308 acres required to satisfy the residential needs of the projected population increase over the next twenty years, plus the 161 acres required for residential replacement, would then total 469 acres.

COMMERCIAL

As previously mentioned, there are basically three major categories comprising the commercial land use in a city or town. The three are the central business district, shopping centers, and strip commercial.

Within the planning area there are 256 acres of land devoted to commercial use. This includes retail trade, wholesale trade, consumer services, professional services, and business services. At present

the commercial land use comprises 5.7 per cent of the developed area. A crude rule-of-thumb procedure usually employed in the preliminary land use plan for estimating the amount of land needed for commercial purposes in cities is 3.32 per cent of the developed area.* Using this formula there should be only 148.1 acres of commercial land use. It is apparent that there is an over-development of commercial land in excess of 50 per cent. This over-development can be largely attributed to the uncontrolled growth of commercial enterprises and the resulting large strip commercial developments.

It should be made clear that commercial enterprises are encouraged to locate in Concord but the past commercial land utilization has been wasteful. Provision for neighborhood centers which furnish convenience goods such as food, drugs and personal services should be encouraged.

Strip business development is inconvenient for customers and creates traffic problems. Most of the strip commercial development in Concord lacks off-street loading and parking areas. A majority of the strip commercial area is interspersed with residences. Mixed land uses such as this creates an undesirable residential environment and acts as a barrier to cluster development of shopping facilities which is one of the antidotes of strip commercial.

Since the formula for commercial land use requirements was developed ten years ago it is not entirely valid at the present time. Greater amounts of land are now required for commercial uses due to increased parking requirements and other accessory uses. Therefore, it can safely be assumed that even with the needed increase in land space requirements for commercial uses there exists no deficiency.

The population increase will add 308 acres to the developed portion of the planning area and another 161 acres will be utilized for residential relocation. Using a formula of 5.8 per cent of the developed area devoted to commercial land use there would then have to be an additional 18-acre requirement for future space needs.

*Harland Bartholomew, Land Uses in American Cities (Cambridge: Howard University Press, 1955), page 47.

INDUSTRIAL

Presently there are approximately 260 acres devoted to manufacturing activities within Concord's planning area. This acreage constitutes 5.8 per cent of the total developed area. During the course of the land use survey it was noted that generally the industrial sites were inadequate as to site size. Most noticeable was the obvious need for off-street parking and loading, landscaping, separation of buildings, and office space. It has been estimated that for most industrial sites, less than one-half of the land area should be used for buildings.* It probably is a safe assumption to make that a 50 per cent land use deficiency exists (or 130 acres).

A recent study of several cities and urban areas revealed that five to seven per cent of their land area may be used for industry. Using this as a criteria, the upper percentage limit is being used, since a variety of sites should be available. This is especially true in Concord where the city has already committed itself to industrialization.

A seven per cent industrial land use factor based on the total planning area would amount to 824 acres. Since there are 260 acres presently under use and an additional deficiency of 130 acres has been calculated, there still is a 434-acre future land use requirement needed to satisfy population growth. This land use allocation also recognizes the steady trend toward one-story plants, plant expansion, and the desire for spacious industrial sites.

In summation, these figures show that Concord requires an additional 130 acres of industrial land because of the present deficiency and another 434 acres for future use. The total acreage required is estimated to be 564 acres.

CIRCULATION

The transportation system which brings people and goods into the city and provides means by which people and goods move about within

*International City Managers Association, (Third Edition, 1959), Local Planning Administrator, page 146.

the city from one type of activity to another is the circulation system of a city. The circulation system includes streets of all types and the separate rights-of-way of certain mass transportation systems.

Total acreage used for the circulation system in the Concord planning area constitutes 1,306 acres, or 29.4 per cent of the developed area. These facilities occupy about 30 per cent of the total developed land in urban areas.* Since present land use for circulation falls within the general range specified, it will be reasonable to assume that no appreciable deficiency exists in space requirements for circulation but street design and layout is below standard.

Calculations show that the entire planning area will grow from a population of 26,536 persons in 1960 to 30,616 in 1980, or 13.2 per cent increase in population. Since the present circulation system conforms to the criteria of 30 per cent of the developed land, it can then be assumed that a proportional 30 per cent increase in the circulation system will suffice for the next twenty years. The total increase needed as space requirements for the circulation system during the next twenty years is 176 acres.

PUBLIC

Public Utilities

The four major categories of public utilities will be discussed and the existing capacity will be related to the future needs of the next twenty years.

Water Supply

At the present time Concord has a water treatment plant capable of processing 8.5 million gallons of water daily. It is located on an eight-acre site. Peak loads during the summer months reach a high of 6.7 million gallons per day. It now becomes necessary to calculate whether the 1.8 million surplus capacity will be sufficient to meet the standards of the projected population increase for the entire planning area over the next twenty years.

*International City Managers Association, Local Planning Administration (Third Edition, 1959), page 189.

The demand for water is related directly to population and expressed as gallons per day (gpcd). To determine the amount of increased water consumption due to population increase it has been estimated that 150 (gpcd) is a safe estimate.* This does not just include domestic consumption but incorporates all other uses.

Since the population gain for the planning area has been estimated at 4,080 persons during the next twenty years, it will then increase water consumption by a maximum of 612,000 gallons. Including the projected increase in water consumption there still would be a 1,188,000 gallon safety factor existing in twenty years.

It is then apparent that neither a present deficiency exists in the water supply capacity, nor will there be one at the termination of the planning period. Map 2 shows the major existing water mains, water tanks, filtration plant, raw water lines and proposed service areas.

Sanitary and Storm Sewers

Sewage flows (gpcd) that are used as a basis in determining the adequacy of treatment structures reflects community differences. Such differences include industrial development, population density, size of residential lots, and per capita water consumption.

This study will only be concerned with the capacity and location of main sewers and treatment plants. The quantity of domestic sewage, and therefore capacity, depends on the population served.

The present sewage treatment plant has a 6,000,000 gallon capacity. With a projected population increase of 4,080 persons within the planning area there would be an additional 408,000 gallons of domestic sewage to be treated. This additional gallonage is computed on the basis of 100 (gpcd) for the population increase. The 100 gallons is the high figure from a range of 75 to 100 (gpcd) used by municipal engineers in urban areas. A potential 92,000 gallon capacity would remain for industrial sewage and as a safety factor. Since full capacity for the sewage treatment plant will probably be reached by the end of the twenty-

*International City Managers Association, Local Planning Administration (Third Edition, 1959), page 235.

CONCORD

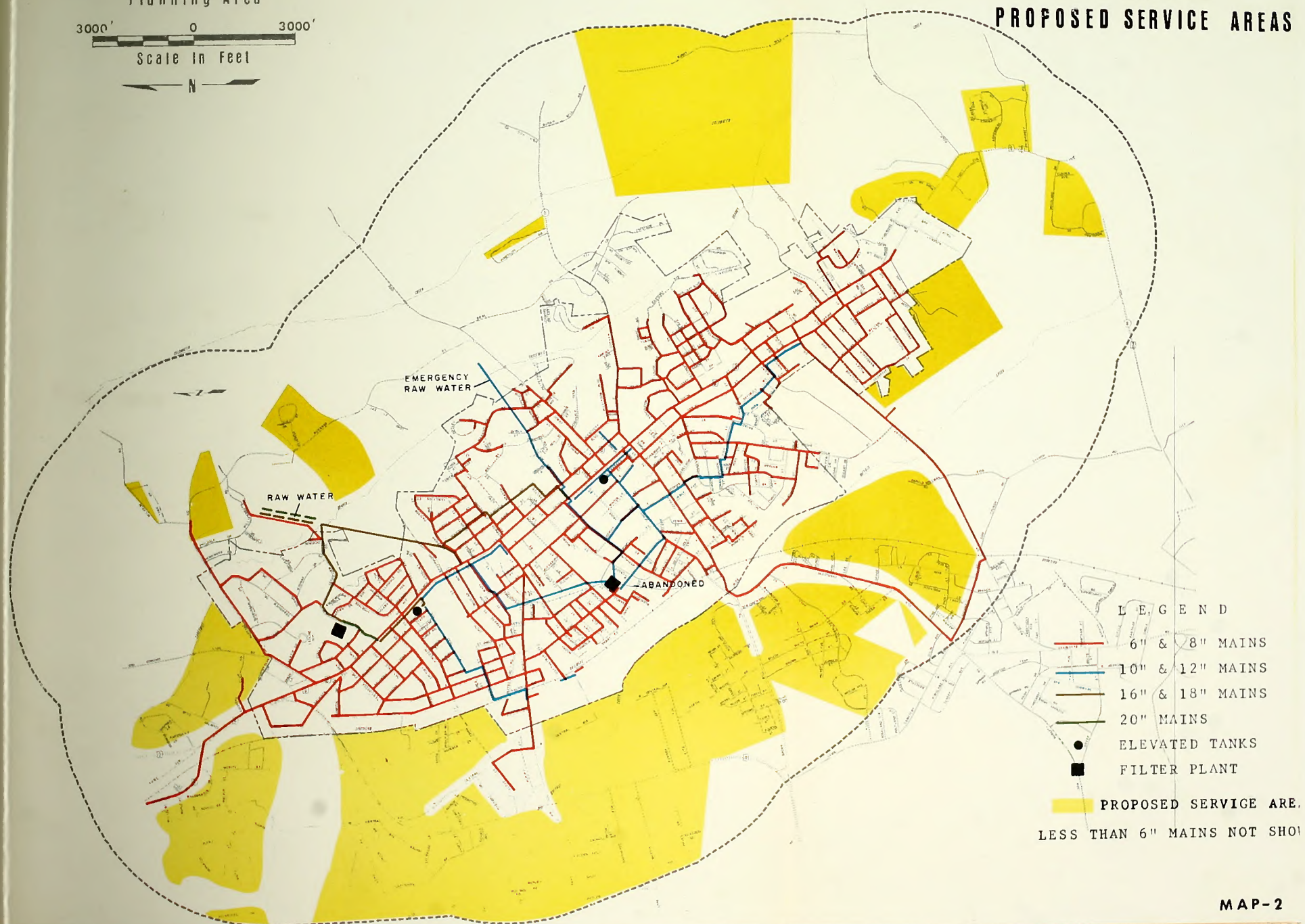
Planning Area

3000' 0 3000'

Scale in Feet

N

EXISTING WATER SYSTEM AND PROPOSED SERVICE AREAS



year planning period, it would be well to investigate this matter in a community facilities study. Map 3 shows the site of the present sewage treatment plant, existing and proposed sewer lines and pumping stations, filtration plant, refuse disposal facilities, and electric distribution plant.

Electricity

The light plant distribution system within Concord is owned by the city. It occupies a site of approximately four acres. At the present time the city is furnishing electric power to certain areas outside of the corporate limits. However, there presently is some doubt as to whether municipalities can legally extend their electric service to the one-mile perimeter planning area. Regardless of how any litigation results, Concord is in a position to distribute electric power for the projected population increase of the next twenty years.

Refuse Disposal

Refuse disposal as defined for the purpose of this report includes only solid wastes, as distinguished from sewage, which is liquid waste.

Concord uses a sanitary landfill operation for its refuse disposal. It has one landfill area which comprises roughly six acres. Since there is enough marginal land within the planning area there appears to be no problem for future landfill sites. These marginal lands can be used as land reclamation projects by filling in the low lying areas. Possible landfill sites will be indicated on the land development map which will follow later in this report.

Public Buildings

Public buildings generally fall into two groups: (1) those that serve the entire community; and (2) those that serve sections of the community and are distributed throughout the community. It is the second category, or the "neighborhood type" that will be given primary consideration.

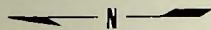
From a planning standpoint the school system will require the greatest amount of land and also act as the focal point for planning

CONCORD

Planning Area

3000' 0 3000'

Scale in Feet



EXISTING & PROPOSED SEWERAGE SERVICE AREAS & ELECTRIC DISTRIBUTION



SEWAGE TREATMENT
PLANT

LEGEND

- EXISTING SEWERAGE AREAS
- PROPOSED SEWERAGE AREAS
- SANITARY LAND FILL
- PROPOSED LAND FILL
- ELECTRIC DISTRIBUTION PLANT

neighborhoods. Table 4 indicates the present school enrollments and site acreages. These figures are then compared to desired acreages. The table indicates the existing acreage deficiency as 119 acres, the acreage for growth as eight acres, and the total acreage of both existing and required by 1980 totals 194.5 acres.

The required standards for schools were taken from those established by the National Council on School House Construction.* They are as follows:

Elementary Schools -	5 acre minimum site plus
	1 acre per 100 students enrolled
Junior High Schools -	20 acre minimum site plus
	1 acre per 100 students enrolled
Senior High Schools -	30 acre minimum site plus
	1 acre per 100 students enrolled

It should be noted that recreational facilities are to adjoin schools and are included in the required site acreage. These figures are not included in the recreation and open space classification.

It appears that an additional branch library, fire station, county courthouse, and police station will probably be required within the planning area. Any attempt to estimate the present land use deficiencies for these facilities would be futile. However, an arbitrary figure of 20 acres will be allotted for these future land requirements.

*National Council on Schoolhouse Construction, Guide for Planning School Plants (Nashville, Tennessee: Peabody College, 1959), Page 297.

TABLE 4

Acreage Required for School Sites
by 1980

Name	Present Enrollment	Projected Enrollment By 1980	Present Site Acreage	Present Required Acreage	Existing Deficiency	Acreage for Growth	Total Acreage Req. 1980
Coltrane-Webb Elementary	653	739	3.0	11.5	8.5	1.0	12.5
Long Elementary	524	593	3.0	10.5	7.5	.5	11.0
Logan Elementary	803	909	5.0	13.0	8.0	1.0	14.0
R. B. McAllister Elementary	409	462	3.5	9.0	5.5	1.0	10.0
Clara Harris Elementary	236	267	2.0	7.5	5.5	.5	8.0
Beverly Hills Elementary	310	351	10.0	8.0	none	none	8.0
Concord Senior High	908	1,028	17.0	39.0	22.0	1.0	40.0
Logan Senior High	636	720	5.0	36.5	31.5	1.0	37.5
Hartsell (High and Elementary)	950	1,075	15.0	39.5	24.5	1.0	40.5
Shackletown Elementary	800	906	17.0	13.0	none	none	13.0
TOTAL	6,229	7,050	70.5	187.0	119.0	8.0	194.5

RECREATION AND OPEN SPACE

The Group Work Council of the Cleveland Welfare Federation describes the objectives of community recreation as providing "conditions under which the individual will be voluntarily using his leisure time in activities which provide enjoyment and contribute to the development of a mature, well-adjusted person, capable of making his maximum contribution to society". It is with these objectives in mind that the community recreation facilities of Concord will be examined.

At present much of Concord's recreational needs are being furnished by other than public agencies. The total acres devoted to recreation are 86. The major share of these 86 acres is occupied by the Concord Golf Club which has 60 acres and is a private facility. Of the remaining 26 acres there are only 16 acres which are publicly sponsored and the remaining 10 acres are provided by industry or churches.

Public open space as defined for the purpose of this category could more properly be termed green areas. The purpose of these areas is to break the monotony of buildings and pavement and to provide aesthetic values. To all intents and purposes Concord is devoid of this type green space.

The California Committee on Planning recommends that 15 acres per 1,000 population should be devoted to overall public open space.* Since the total planning area had a population of 26,535 persons in 1960 there should have been roughly 400 acres in recreational land use. Therefore, a 314-acre deficiency existed in 1960. With a projected increase in population to 30,615 persons in 1980 there will be another 59 acres needed.

The type of facilities which are required will be discussed when the land development plan is presented.

*International City Managers Association, Local Planning Administration, (Third Edition, 1959), Page 271.

TRANSPORTATION

The only proposal made in this category is for a cooperative effort between the Southern Railroad, industry, and the city government for the construction of a new passenger and freight station. This site would cover approximately five acres.

The following chapter makes reference to the possibility of eventually obtaining an airport site. This site would be preferably located outside of the Concord planning area and consequently no land use requirements are made. It would be desirable to have it serve both the Kannapolis and Concord area jointly.

SEMI-PUBLIC

There are approximately nineteen churches of various denominations and faiths in the area. Although the total acreage for church sites seems adequate, there undoubtedly will be a need to relocate some of the churches to serve the newly developing residential areas. The expected consolidation of various Protestant denominations will undoubtedly result in the eventual reuse of some land now utilized as church sites. The future entrance of any new church groups into the area could have their land requirements satisfied by the release of the above mentioned acreage. Concord also has a National Guard Armory and a variety of fraternal organizations in the area.

Any new semi-public facilities will undoubtedly be guided in their location through the zoning ordinance which will be instituted in Concord within the next year. There is enough flexibility in the residential land allocation to permit sufficient reservations of land for semi-public use as they arise.

SUMMARY

Table 5 indicates the present land use deficiencies for each individual general land use category and also shows the required acreage needed to satisfy the population growth by 1980. The last column gives the overall acreage which will be required by 1980.

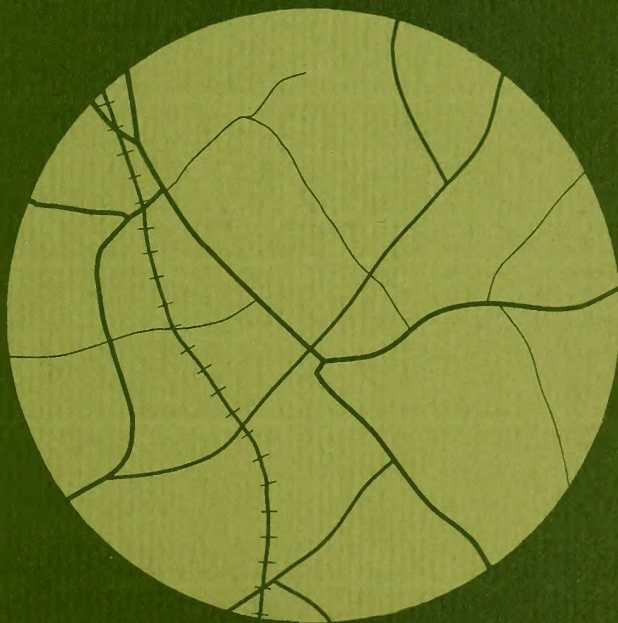
TABLE 5

Summary of Additional Land Use Requirements
by 1980

	For Growth	For Deficiencies	Total Acres Required
Residential	308 acres	190 acres	480
Commercial	18 acres	none	18
Industrial	434 acres	130 acres	564
Circulation	176 acres	none	176
Public	28 acres	119 acres	147
Recreation and Open Space	59 acres	314 acres	373
Semi-Public	5 acres	*none	5
TOTAL			1,771

*not estimated

THE LAND USE PLAN



CHAPTER IV

THE LAND USE PLAN

All of the previous material contained in this report has concerned itself with land use conditions as they now exist, desirable qualitative standards for each functional land use, and finally the desired space requirements necessary to fulfill the qualitative standards. During the discourse on these subjects there has been repeated reference to existing problems within the Concord planning area. It is at this point that possible solutions and recommendations are offered which will advantageously guide the land development of Concord during the next twenty years.

The various functional land uses have been defined in broad categories and will be discussed according to their present form, redeveloped, or expanded. It should be kept in mind that the land development plan which is to be presented is only general in nature. There is a considerable degree of flexibility regarding the positioning of each individual use involved but the plan does offer the general locations for those individual uses. There may be some deviations from the general land development plan, but the basic concept of the plan must be retained.

Throughout this discussion of Concord's land use problems there have been repeated references to the need for proper zoning, subdivision regulations, housing codes, and other instruments to implement a desirable land development policy. It is through the use of these tools that the ultimate fruition of the plan will result. A general land development plan as finally adopted and adequately implemented should prove a useful guide to the development of land within the Concord planning area for all citizens and land developers.

FUNCTIONAL LAND USES

Commercial

For the purposes of discussing this category it will be advisable to divide retail trade into its three component parts which are the

central business district, strip commercial and shopping centers. Wholesale activities will be considered as a separate entity.

1. Central Business District. The first element that should be noted about Concord's newly designed CBD is that the overall acreage of the area has been increased from 56.6 acres to approximately 70 acres. Map 4 depicts the present boundaries of the CBD and compares it with the enlarged version.

Not only has the overall dimensions of the CBD been increased but uses which are incompatible to this type area will be phased out and relocated in compatible districts. The central retail business district has been planned so that only those types of activities that find it mutually advantageous will be located in the area.

The following steps have been taken in conjunction with the enlargement of the CBD.

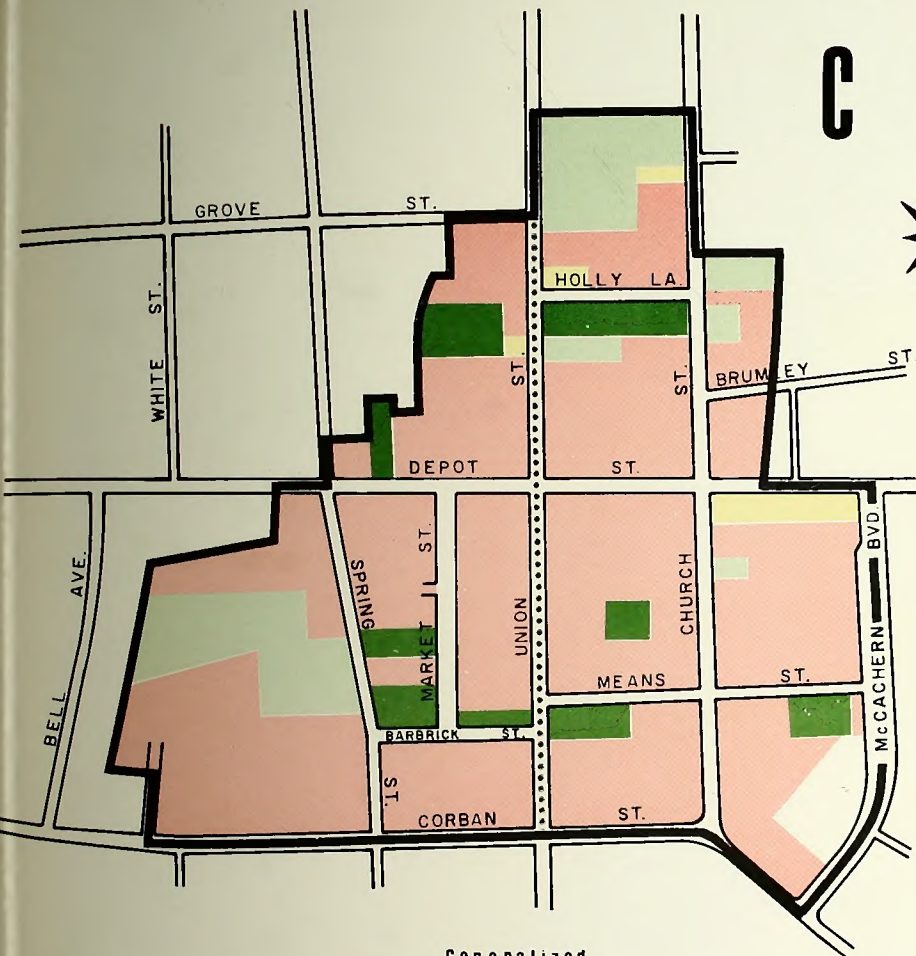
1. The eventual removal of 55 residential structures from within the area. Two of these residences are dilapidated and twelve are in need of major repair. These dwellings could be razed under the short-range concept, while the remaining forty-one could be removed as a long-range plan.

2. The present County Courthouse, which is approximately 100 years old, should be replaced by a more functional building on a site bounded by Union, Corban, Church and Means Streets. This site is of sufficient size to allow for a cooperative effort in constructing a city-county building. Incorporated in this structure would be most city and county administrative offices. The site would allow for a park-like setting and add human scale to the downtown area. The present municipal building could accommodate the school administrative offices and provide space for other city functions not located in the city-county building.

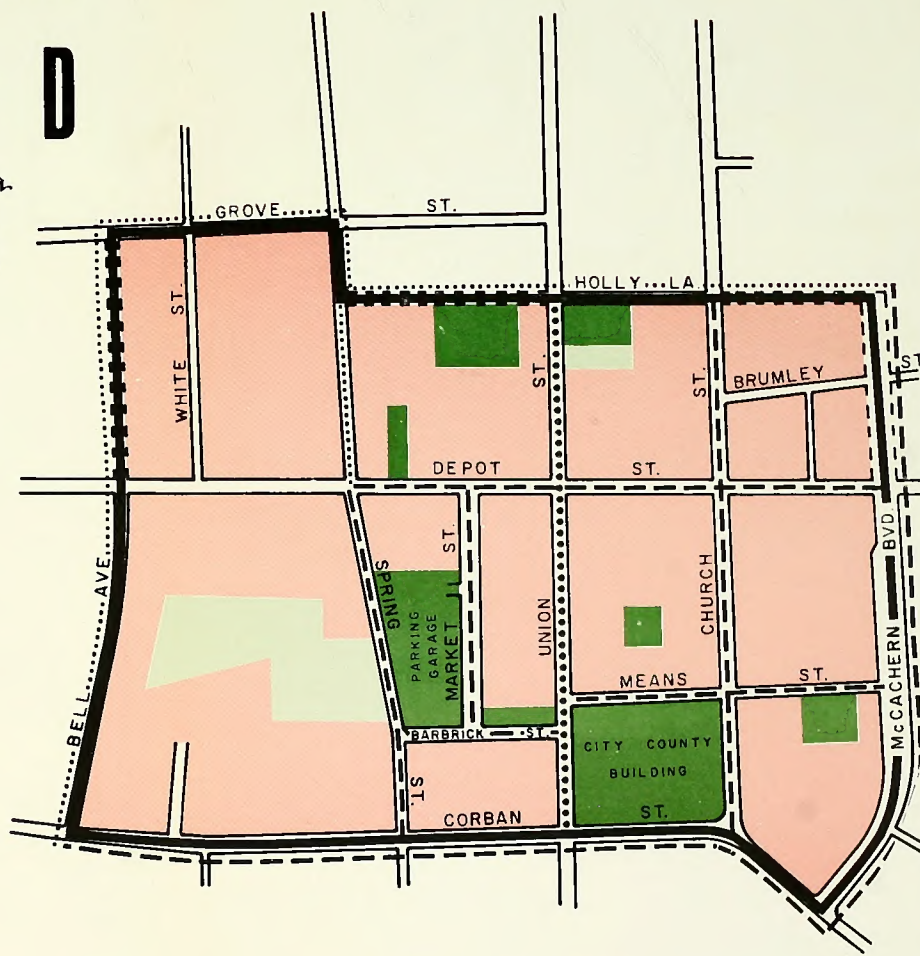
CONCORD

North Carolina

C B D



Generalized
EXISTING LAND USE



PROPOSED LAND USE

LEGEND

VACANT
RESIDENTIAL
COMMERCIAL
PUBLIC
SEMI-PUBLIC

STREET EXTENSIONS
C.B.D. BOUNDARIES
UNDERGROUND LIGHTING
3 TO 5 YEARS
5 TO 10 YEARS

3. The fire station on Church Street which is in a congested area and consists of a functionally poor plant has been scheduled for relocation on the periphery of the city at McCachern Boulevard and Depot Street. The site will accommodate both the main fire station and police headquarters.

4. A site has been provided in the block bounded by Barbrick, Union, Spring, and Depot Streets for the construction of a parking garage. It is so located that it will serve clients of the city-county building, the municipal building, and also be in the heart of the shopping district. This will allow for the closing of several public surface parking lots in the CBD, and thus provide additional space for shops, offices, motels, and other activities germane to the area.

5. Prohibit on-street parking within the CBD when the proposed parking garage and city-county building have become a reality. This would allow for the elimination of parking meters within the CBD. The elimination of parking meters should add to the visual presentation of the area. The cliché that streets were constructed to drive on and not to park on is probably as good a justification as any for the elimination of on-street parking. It would ameliorate the traffic congestion of the CBD and improve the safety factor for motorist and pedestrian.

The above five steps combined with the proposed thoroughfare plan should materially aid in the revitalization of the CBD.

2. Strip Commercial. The strip commercial activities in the northern part of Concord along Church Street and U. S. 29 have been retained. They have been so strongly developed that it would not be feasible to do otherwise. However, provision has been made to extend the depth of the property along these two strips so that adequate

ingress and egress can be provided to the adjoining businesses, and also allow for off-street parking. This should materially lessen the traffic congestion along both arteries.

Buffering strips should be mandatory between the rear of these commercial enterprises and the abutting residential property.

3. Neighborhood Shopping Centers. Eleven neighborhood shopping centers have been provided throughout the various neighborhoods. These facilities will furnish convenience goods such as foods, drugs, and personal services. They are generally located so as to service a particular neighborhood and are so positioned that they are easily accessible by either pedestrian or motorist. Sites of between five and ten acres provide for accessory uses such as adequate parking and landscaping have been proposed.

This type of shopping center should act as a deterrent to further growth of strip commercial throughout the planning area. They will not stifle business in the CBD since comparative shopping items are not featured in this type center.

4. Wholesale Areas. Two major wholesale areas have been provided in the land development plan. The largest area is located on Central Avenue and is directly adjacent to the largest industrial development in the planning area. It also is in close proximity to the CBD and has excellent transportation facilities both by rail and truck. The other wholesale area is located toward the southern terminus of Union Street. It is designed to service a substantially smaller industrial complex in the southern portion of the planning area. These areas can serve both industry and commercial firms.

Industrial

There are basically five areas dedicated to industrial development. Every effort has been made to retain all existing industrial sites that warrant retention. In some instances the sites are inadequate or the structures themselves are substandard. When either or both of these conditions existed it was necessary to plan for the phasing out of the facilities.

The major industrial complex of Concord is located in the west-central part of the planning area. Most of the industry in this vicinity is of a heavy type but not of a noxious nature. Sufficient area has been allocated for off-street loading and parking, landscaping, and other accessories. A minimum amount of buffering strip will be needed to protect adjoining residential property. The Southern Railroad and the newly created inner loop serve as major transportation arteries. Easy access and egress is also available by means of the new outer loop which services the outer portion of the planning area.

The south-central area envelopes the second major industrial area. This area is also adjacent to the railroad and the inner loop. A major arterial, Wilshire Drive, provides movement to the outer loop.

The third largest industrial area is located in the northwest and borders U. S. 29 and U. S. 29-A in the general location of their intersection. This area is confined to light manufacturing which already exists. Both the railroad and the two highways furnish excellent transportation. The railroad and thoroughfares act as dividers from adjoining residential areas, and sufficient area also has been provided for a desired green belt between the areas.

It should be noted that some land, especially along Buffalo Creek, is not suitable for industrial development and has been screened out as marginal land.

The remaining two areas are of a light manufacturing nature and are located on Church Street and Depot Street. Sufficient area has been allowed for off-street parking and loading, landscaping, and green belt buffering. Since these types of industries primarily require truck transportation, they have adequate arteries on Church and Depot Streets.

The major portion of the industry has been located in a natural corridor formed by the newly created loops and the railroad which also follows the stream bed of Buffalo Creek.

Recreation

As previously mentioned in the land use survey analysis of Concord, there is a dearth of recreational facilities. To substantially increase these facilities two techniques have been utilized. Small parks and recreation space have been included in the areas allotted to school sites. Since elementary schools are used as the focal point in planning the neighborhoods, most of these areas are within walking distance for neighborhood residents.

The other solution to the shortage of recreational facilities has been the proposal for two city-wide parks. One park is located in the eastern part of the planning area directly bordering the proposed extension of Wilshire Drive. This area has rather rough topographic features and includes Coldwater Creek which runs through the proposed park. The area provides a quiet atmosphere removed from the noise and congestion of the city and yet capitalizes on the natural features such as streams, ravines, hills and other undisturbed natural qualities.

The other proposed park borders Poplar Tent Road and U. S. Highway 29. Irish Buffalo Creek meanders through the proposed site and adds to its desirability as a park. Again, the area is not suitable for other types of development because of its undulating topography, but it does offer ideal requirements for a park.

These two parks should include such facilities as picnic areas, boating and swimming facilities, winter sports, bridle paths, and other forms of active participation. The two proposed parks are readily available by automobile or public transportation and are within a maximum of fifteen minutes from any section of the area to be served.

Study Area 8 has been designated as a redevelopment area and will eventually contain the bulk of multiple dwellings in the planning area. Since this area also will undoubtedly have the highest residential density, it has been proposed to locate a neighborhood park between Depot Street and Corban Street. This park will also act as a buffer zone between the residential area and the CBD.

Schools

The largest allocation of land in this category is devoted to schools. Ideally it is desirable to have an elementary school centrally located in each neighborhood within a one-half mile radius of all homes in the area. This ideal cannot be so easily attained in a community that has been highly urbanized. Land is often scarce and very expensive to purchase. It also is necessary to utilize existing schools by means of expansion and conversion, to avert vast outlays of capital. A combination of expansion, conversion, and new construction has been utilized in developing a well-integrated school system for Concord. Compounding the difficulty in establishing the school system is the fact that no standardized grading of schools has previously been implemented. School officials in Concord have made a decision to use a 6-3-3 grading system in the schools and it is along with this desirable decision that the schools have been planned.*

For the purposes of this land development plan, the Concord planning area has been divided into twelve neighborhoods. Map 5 indicates the relative position of the schools to the neighborhood or neighborhoods being served.

The following steps were utilized in developing an adequate school system that will serve the needs of all residents in the entire planning area over the next twenty years:

1. The proposed new Concord High School in Study Area 2 will serve all neighborhoods with the exception of Study Area 8. It will serve students in grades 10-12.
2. The old Concord High School will be converted to a Junior High School serving Study Areas 7, 9, 10, 11, and 12. This school will encompass grades 7 through 9.
3. The Clara Harris Elementary School in Study Area 5 will be expanded and converted to a Junior High School and serve Study Areas 1, 2, 3, 4, 5, and 6. It will cover grades 7 through 9.

*Interview with Woodrow W. Hartsell, Superintendent of Schools, Concord, North Carolina, January, 1965.

CONCORD

Planning Area

3000' 0 3000'

Scale in Feet

N

NEIGHBORHOODS & SCHOOL SERVICE AREAS

NUMBERS INDICATE AREAS SERVED



LEGEND

NEIGHBORHOOD BOUNDARIES

EXISTING SCHOOLS

PROPOSED SCHOOLS AND ADDITIONS

4. A new high school is proposed in Study Area 8 to serve this densely population area. The school would incorporate grades 9 through 12 and thus vary from the desired grading system of 6-3-3. The reason for this variance is that this neighborhood cannot justify a junior high school on the basis of population.
5. The present Logan High School will be converted to an elementary school and service Study Area 8 with grades 1-6.
6. The Shackletown Elementary School will be enlarged to service Study Areas 11 and 12. This school will accommodate grades 1-6 as well as the remaining elementary schools mentioned. Although this presently is a County School, it is reasonable to expect that this developing residential area will be annexed to Concord by 1980.
7. The Coltrane-Webb Elementary School will be expanded and serve Study Area 10.
8. The Hartsell County School will be converted to an elementary school. At present it serves grades 1-12. It will accommodate Study Area 9 and the half of Study Area 7 lying in closest proximity to Study Area 9.
9. The McAllister Elementary School is proposed for expansion and will fulfill the needs of Study Areas 4, 5, 6, and half of Study Area 7 lying in closest proximity to the school.
10. The Beverly Hills Elementary School will retain its present site size and serve Study Areas 1, 2, and 3.
11. It has been deemed advisable to convert the Long School to another use or dispose of it in some other manner since its location does not warrant its use. Other nearby elementary schools are sufficient to serve the area.

Public Buildings

As previously mentioned in this report, there has been a proposal to construct a City-County building on an expanded site where the present County Courthouse stands. It also has been proposed that the present municipal building be utilized for administrative offices for the Board of Education. Any excess space in this building could be used for various other municipal needs as required. This will group most of the local governmental buildings and depart from the free-standing structures that have previously existed. It should prove more effective from a functional standpoint and also provide easy accessibility from all parts of the city.

As previously suggested, the central fire station should be relocated away from the congested area where it now is situated. A new site has been selected on Depot Street which is on the periphery of the CBD. The new location would make three basic improvements. First, it would facilitate the movement of fire equipment since the area is less congested; secondly, it would provide sufficient area for fire-fighter training programs and allow for the construction of a modern and functional building; third, it would be located in conjunction with the newly proposed police headquarters and provide excellent liason between the two departments. Another fire station has been proposed in the northeastern part of the planning area along Brookwood Avenue. This proposal is made on the basis that the rapidly developing northern portion of the planning area has insufficient fire protection at present and this condition will become more acute as the area develops. Also, the newly proposed Concord High School in this section of the area would dictate that more fire protection will be required in this area.

A proposal to build a modest-sized library on Westbrook Avenue in the north-central area should prove beneficial in two respects: first, it will meet the needs of a rapidly developing residential section, and second, it will provide easier accessibility to library services for residents of this area.

Additionally, the proposed parking garage which was discussed in the central business district portion of the study will complete the

projected needs for public buildings.

The sewage plant and water filtration plant should be adequate to serve the planning area over the next twenty years. Also, refuse disposal facilities should be adequate over the projected planning period and this reinforced by the fact that enough marginal land exists to satisfy any eventual shortage of this type land.

Transportation

Within the planning area there is one privately-owned airport. This type of airport is known as a "secondary" airport since it does not have paved runways and is intended only for light airplanes. According to standards developed by the Federal Aviation Agency, the radii to be reserved around this type of airport should be one mile. The present airport falls far short of this desired standard. However, since a considerable investment has already been made in the airport, it is not reasonable to suggest scrapping it. However, the location of additional airports must consider the airspace requirements of both existing and new fields.

Recently there has been interest manifested for a "local" airport which can accommodate executive planes and twin-engine transports. It has been suggested that this be a joint effort between Kannapolis and the City of Concord.

Should an airport of this type be seriously considered, it would be advisable to have the FAA do case studies on several sites. Should it be decided that this be a municipally-owned and operated airport, it would be possible to secure grants from the Federal government for such items as construction of runways, land purchase, control tower operation, and radio navigation. Acceptance of these grants obligate the municipality to operate the airport for a specified number of years. However, the decision may be to operate the airport as a private airport and thus obviate these requirements.

A proposal has been made to relocate the present passenger and freight railroad station. The present facility is in a dilapidated condition and is poorly located for expansion. The suggested location

is at the north end of the large industrial complex along the Southern Railroad. This, of course, would have to be a cooperative effort between the railroad industry and the municipality involved.

Semi-Public

Cabarrus Memorial Hospital, which is located in the northern portion of the planning area, has tentative plans to enlarge the County-owned facility from 250 beds to 750 beds. The imminent passage of the medicare bill may require the County to furnish space for care of the elderly. The proposed enlargement of the hospital will meet these needs.

In December, 1964, the Concord Chamber of Commerce, Merchants Association moved to a newly-remodeled building on North Union Street. This not only implements semi-public services but also aids in the revitalization of the CBD.

Marginal Land

Two areas have been proposed as marginal land, or areas not suitable in their present condition for residential, commercial, or industrial development. This designation is made because of poor drainage, rugged topography, or a variety of poor soil conditions. Some of this land could be reclaimed through deepening channels of streams, draining low-lying areas, landfill, and through other techniques. This would then make it possible to utilize the land for recreational sites, junk yards, refuse disposal sites, and in some instances, for limited types of construction.

Residential

The finalized land development plan for the Concord planning area has twelve neighborhoods designated. Major thoroughfares, the corporate limits and the one mile perimeter have been utilized as boundaries for the neighborhoods. The optimum has not been reached in plotting these neighborhoods for a variety of reasons.

At the time of this land development study there already existed a highly developed urbanized area. As a consequence, many of the major roads

already existed and no neighborhood concept had been planned. As a result, some of these arteries bisect neighborhoods. The thoroughfare plan for Concord, which follows this section, ameliorated this condition to a large degree. In some instances it was impossible to eliminate some major roads which now bisect the neighborhoods. To eliminate these thoroughfares would have imposed too great a financial burden.

Using the elementary school as the focal point for planning the neighborhood posed somewhat the same problem as thoroughfares. Since most of the schools were structurally sound, it was not advisable to phase them out. Instead conversions and expansions provided the answer. Many are not situated within the desired walking distance of one-half mile for all children attending the schools but the discrepancies are generally not too great. In some of the neighborhoods that have only developed to a minor degree, it has been necessary to incorporate two or three neighborhoods as the attendance area for one elementary school. This added distance to attend school can be rectified by utilizing school buses. As the outlying neighborhoods are populated it will eventually be possible to construct elementary schools within each neighborhood.

The defining of general land use development areas by necessity requires the demolition of some residences. Every effort was made to keep demolition to a minimum. Most of the residences slated for razing are in the major repair or dilapidated structural condition classification. A re-use of residential land will dictate a relocation of some families. It is reasonable to expect that much of the relocation will take place in the newly developing residential areas outside the corporate limits.

Redevelopment Area

Neighborhood 8 has been designated as a redevelopment area due to the high percentage of substandard dwellings. It is for this reason that a proportionately higher share of public facilities have been proposed for this neighborhood than for the others. A major share of the area would require demolition and in such a situation it is feasible to make more and larger improvements.

There is a sufficient amount of vacant land within Neighborhood 8 to allow for redevelopment to proceed in stages. By utilizing this technique there will be few problems in relocating families.

It is anticipated that a large percentage of the new dwelling units will consist of multiple public housing units. This, of course, will raise the density and provide additional land for the other proposed facilities in the area.

Map 6, which follows, depicts the proposed land development plan for Concord.

There is a sufficient amount of vacant land within neighborhood
to allow for redevelopment to proceed in stages. By utilizing this
technique there will be few problems in relocating families.

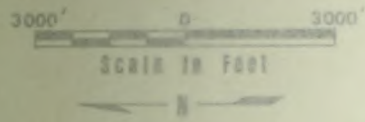
It is anticipated that a large percentage of the new dwelling
units will consist of multiple public housing units. This, of course,
will raise the density and provide additional land for the urban pro-
posed facilities in the area.

Map 8, which follows, depicts the proposed land development plan
for Concord.

THE SKETCH THOROUGHFARE PLAN



CONCORD Planning Area



LAND DEVELOPMENT PLAN NEIGHBORHOODS SKETCH THOROUGHFARE PLAN



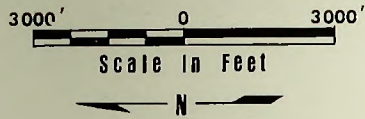
LEGEND

RESIDENTIAL	
REDEVELOPMENT AREAS	
THOROUGHFARE	
EXISTING	
PROPOSED	
WATERWAYS	
EXISTING	
PROPOSED	
RAILROADS	
EXISTING	
PROPOSED	
UNIMPROVED AREAS	
EXISTING	
PROPOSED	

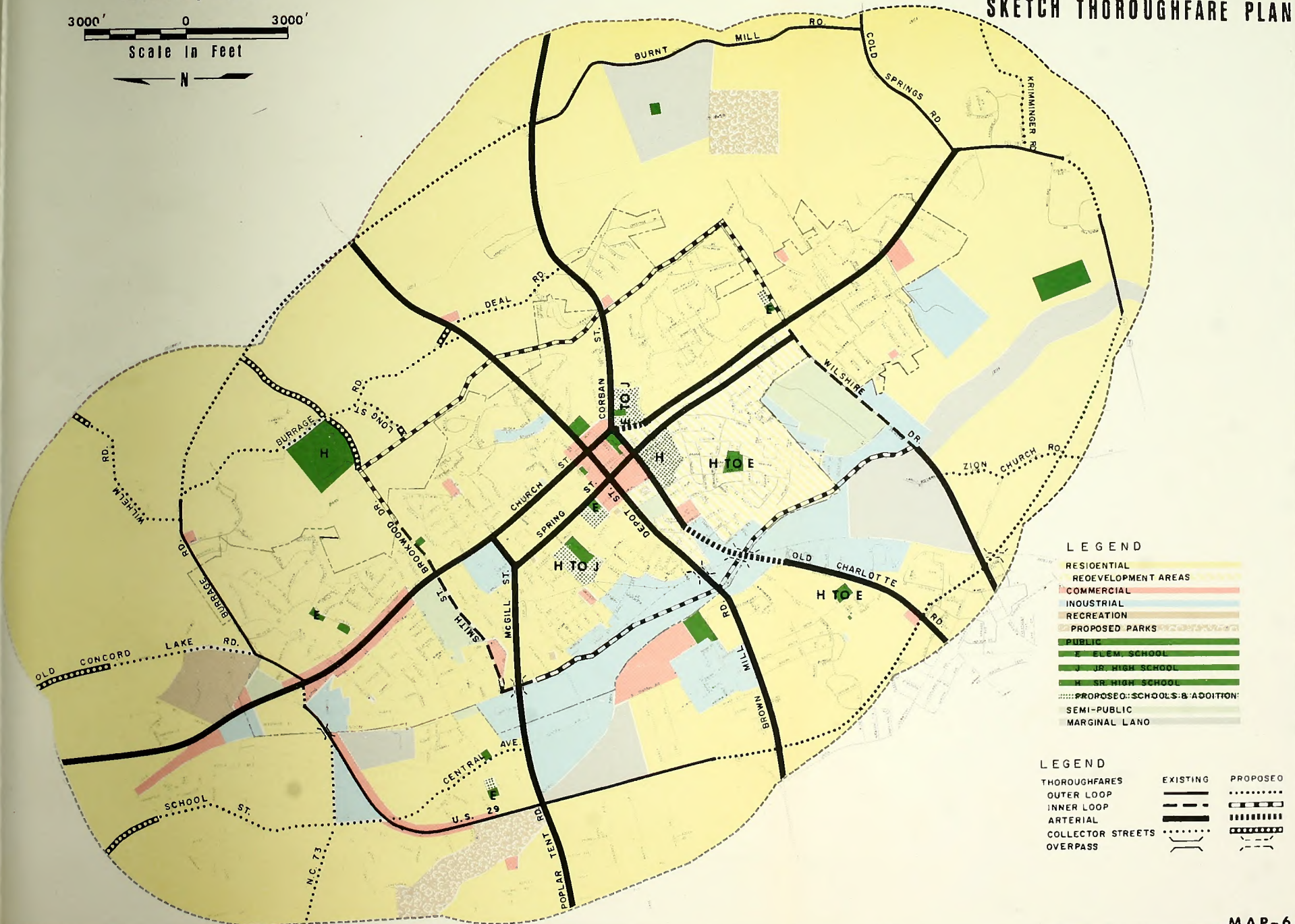
LEGEND

EXISTING	PROPOSED
THOROUGHFARE	THOROUGHFARE
EXISTING	PROPOSED
WATERWAYS	WATERWAYS
EXISTING	PROPOSED
RAILROADS	RAILROADS
EXISTING	PROPOSED

CONCORD Planning Area



LAND DEVELOPMENT PLAN AND SKETCH THOROUGHFARE PLAN



CHAPTER V

THE SKETCH THOROUGHFARE PLAN

Essentially there are three major components in any well-integrated land development plan. The land development itself, a community facilities plan, and the thoroughfare plan are the three major components. To state it more succinctly would be to say that one is dependent on the other. The movement of goods and people in an area constitutes the circulation system. Obviously, any category of land use designation becomes functionally efficient largely through the ability of the circulation system to effectively move goods and people. Conversely, the land use areas must be correlated with the circulation that will serve them. Finally, the community facilities plan details proposals for the public uses of land and makes the land development plan operational.

In addition to the circulation system providing a means of transporting goods and people it also serves another vital function. It provides the demarcation lines of land use areas where natural boundaries do not exist and in most cases defines the boundaries of neighborhoods within a city. As the city develops the circulation system becomes the reference point for improvements and extensions of the system itself.

The circulation plans for Concord should conform to the following basic principles:

1. The system should be composed of local, collector, arterial, and free-way type arteries as defined in Chapter II of this study.
2. Collector, arterial, or free-way type arteries should follow the boundaries of residential neighborhoods rather than crossing them internally. A minimum distance of one-half mile should separate these traffic ways except in the areas of high population density.
3. The circulation system should be coordinated with those of adjoining cities, counties, and with the state system of highways.
4. Major thoroughfares carrying opposing flows of traffic should be provided with dividing or median strips.
5. Grade separations should be utilized at intersection conflict points.

6. Streets and rights-of-way should conform to the following standards:

	<u>Width</u>	<u>Right-of-Way</u>
Local Streets	24-48 feet	50-60 feet
Collector Streets	40-48 feet	60-80 feet
Arterial Streets	48-60 feet	150-200 feet
Freeways	48-60 feet	100-200 feet

7. Thoroughfares should be provided with directional signs, name signs, and route signs which are plainly visible day and night.
8. Abutting property on major thoroughfares should be provided with service roads where access and egress to adjoining property is frequent. They should not interfere with through traffic.
9. Major and secondary roads should be landscaped on both sides wherever possible.

The proposed changes in the existing thoroughfare system of Concord are as follows:

Major Roads

1. An outer loop has been proposed which utilizes U. S. 29, U. S. 29-A, Cold Springs Road, Burnt Mill Road and Burrage Road as the existing thoroughfares for the framework of the loop. These thoroughfares are joined by proposed connecting links of road. The proposed sketch thoroughfare plan map accompanying this report will fully detail the proposals incorporated in the outer loop and indicate its course.
2. An inner loop road has been proposed with a distant of approximately three-quarters of a mile separating the inner and outer loops. The purpose of the two loops is to allow large volumes of traffic to move efficiently without congesting local streets.

Arterials

1. An extension of Old Charlotte Road has been proposed commencing at Lawings Avenue and joining Corban Avenue at Shipworth Avenue.
2. Corban Avenue has been extended from a point just outside the corporate limits to the one-mile perimeter border.
3. Wilshire Drive will connect with the southern leg of the inner loop and an extension of this leg to the one-mile perimeter border.

4. A connecting link from Church Street to Union Street is proposed. It commences at Church and Corban Streets and joins Union Street at Bost Alley.

Connectors

1. Extend Zion Church Road to connect with the proposed inner loop.
2. Extend Central Avenue to connect with the northern border of the one-mile perimeter.
3. Extend Concord Lake Road to the northern edge of the one-mile perimeter.
4. Extend Wilhelm Road to the one-mile perimeter border.
5. Extend the northern leg of the inner loop to the one-mile perimeter.
6. Connect Long Street to the eastern edge of the inner loop.
7. Extend Priminger Road to the one-mile perimeter.

CBD Traffic Pattern

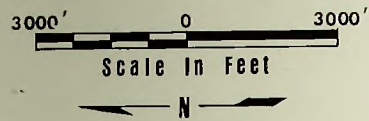
1. Extension of Bell Avenue to connect with Grove Avenue.
2. Extend Holly Lane to connect with Spring Street.
3. Extend Spring Street from the newly proposed extension of Holly Lane to Grove Street.
4. Extend McCachern Drive to meet the newly proposed extension of Holly Lane from Church Street to McCachern Drive.
5. Extend Corban Street to join Bell Avenue.
6. A de-emphasis of Union Street as an arterial road to a local road.

The above proposals for the CBD circulation pattern will allow for traffic not wanting to enter the CBD to circumvent it by utilizing the periphery thoroughfares of the area. These periphery roads of the CBD allow for a connection back to the major arterials running north, south, east and west.

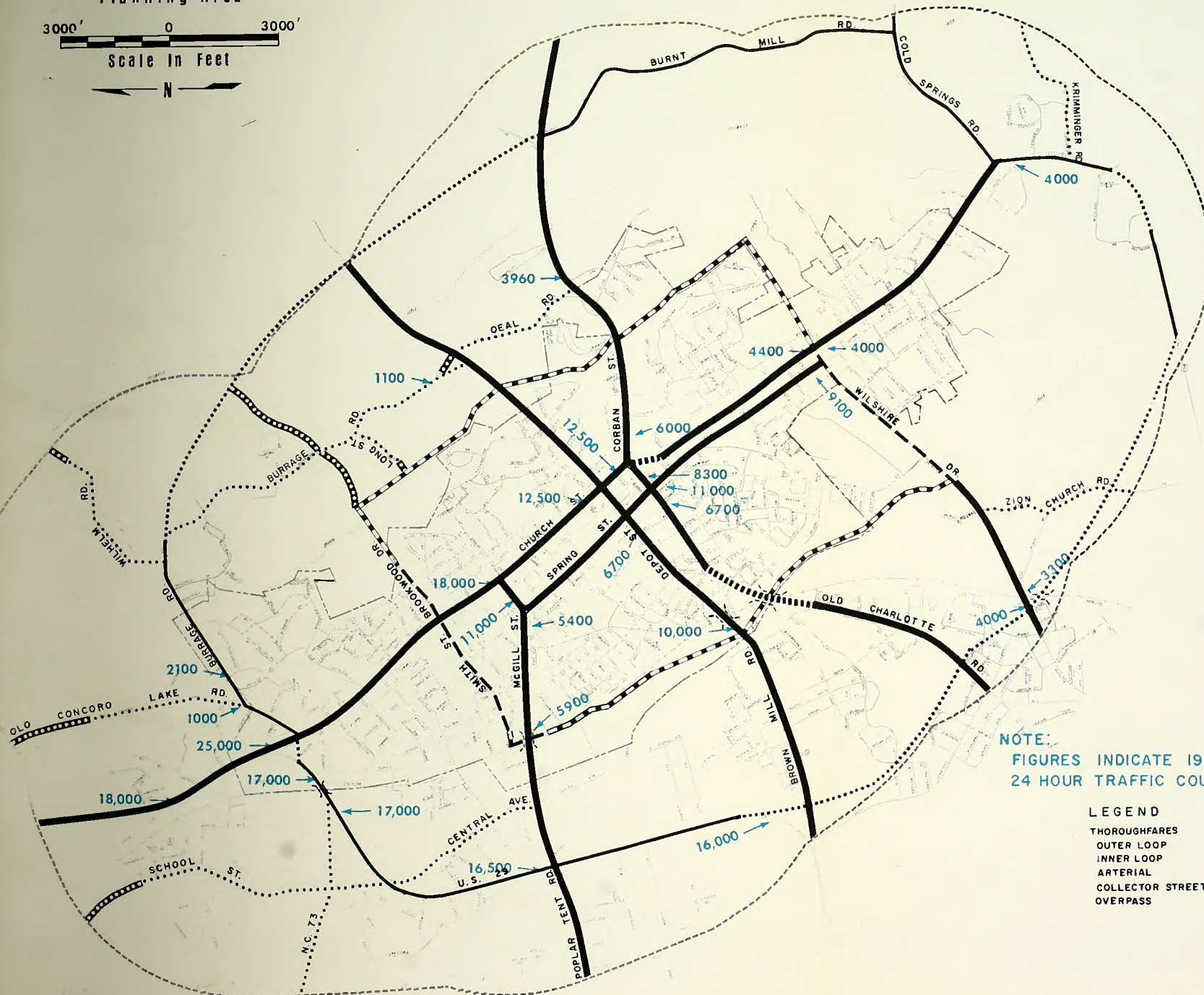
Spring, Church, Corban and Depot Streets form a secondary loop within the CBD and allow for dissipation of traffic that may want to enter the CBD but not inclined to use the most heavily commercialized section.

CONCORD

Planning Area



SKETCH THOROUGHFARE PLAN



NOTE:
FIGURES INDICATE 1963 AVERAGE DAILY
24 HOUR TRAFFIC COUNTS.

LEGEND

THOROUGHFARES

OUTER LOOP

INNER LOOP

ARTERIAL

COLLECTOR STREETS

OVERPASS

EXISTING

PROPOSED

EXISTING

PROPOSED

EXISTING

PROPOSED

lower the value of surrounding property. Since the operation of railroad facilities is intimately connected to the thoroughfare plan and the general development of the city it is of utmost importance that a long-range grade separation program be completed. The community must be advised far in advance regarding the proposed grade separations so that public and private development can proceed with these proposals.

It is suggested that the Southern Railroad be apprised of the land development plan for Concord as finally adopted. This will allow for a cooperative effort between the city government and the railroad in establishing adequate crossings in the future. An understanding of the land development plan by the railroad will also allow for corrective measures at existing grade crossings based on the planned growth of Concord.

Traffic Counts

Map 7 incorporates an origin and destination study completed by North Carolina Highway Department in 1963. The arrow and figures indicate the most direct paths that one would desire to use in going from origin to destination. These direct paths are sometimes referred to as "desire" lines. A composite of these desire lines generally indicates where transportation service is needed.

The most heavily traveled thoroughfare in the Concord planning area is Church Street. From the CBD to McGill Avenue the increase in daily average traffic goes from 12,500 cars to 18,000 traveling in a northerly direction. The traffic in a southerly direction runs from 18,000 vehicles daily at the southern corporate limits to 11,000.

The long-range implementation of the proposed thoroughfare plan should divert some of the traffic from Church Street. However, the traffic congestion is presently so acute that short-range measures must be implemented. The following short-range proposals would alleviate some of the traffic congestion:

1. Prohibit parking on both sides of Church Street.
2. Limit the number of right and left turn points from Church Street.

3. Creation of a number of cul-de-sac streets which presently intersect at Church Street and thus divert some of the north and south traffic to Union and Spring Streets.

An evaluation of the thoroughfare plan will reveal that it has been developed so as to furnish adequate transportation service in the areas where "desire" lines are the greatest. It also is predicated on the predicted amount of land used, the type of land it is and the intensity of its use.

Map 8 depicts a proposed thoroughfare plan prepared by the Advanced Planning Section of the North Carolina Highway Department. There are some differences in the two plans presented and these should be resolved by the Planning Board so that an official thoroughfare plan can be adopted.

SKETCH THOROUGHFARE PLAN

By N.C. Highway Commission

CONCORD

Planning Area

3000' 0 3000'

Scale In Feet

N



LEGEND

MAJOR THOROUGHFARES
MINOR THOROUGHFARES

EXIST.
ALIGN.

NEW
ALIGN.

LONG
RANGE

MAP-8

IMPLEMENTATION CONCLUSION



CHAPTER VI

IMPLEMENTATION

The land development plan for the Concord planning area at this point is merely tentative. Until such time as the Planning Board adopts the plan it has no official recognition. However, when it is adopted in its final form it then serves as a generalized guide for land development.

A conversion from this interim-type program is only possible through implementation of the elements that constitute a comprehensive plan. The following material will concern itself with these elements.

Subdivision Regulations

The State of North Carolina has authorized any incorporated city or town to adopt a subdivision ordinance or any amendment thereto. They are authorized to regulate the platting and recording of any subdivision of land lying within the municipality or within one mile in all directions of its corporate limits and not located in any other municipality. Should any land lying outside a municipality be within one mile of more than one municipality, the jurisdiction of each municipality shall terminate at a boundary line equidistant from the respective corporate limits of each such municipality.

Such an ordinance should provide for the orderly development of the municipality and its environs; for the coordination of streets within proposed subdivisions with existing or planned streets or with other public facilities; for the dedication or reservation of rights-of-way or easements for street and utility purposes; and for the distribution of population and traffic which shall avoid congestion and over-crowding, and which shall create conditions essential to public health, safety, and the general welfare.

The definition of a subdivision as it applies to municipalities in North Carolina is as follows:

"A subdivision shall include all divisions of a tract of land into two or more lots, building sites, or

other divisions for the purpose, whether immediate or future, of sale, or building development, and shall include all divisions of land involving the dedication of a new street or a change in existing streets."

There are some exceptions to this general definition as described in the General Statutes of North Carolina, but for purposes of this report this definition will suffice.

At the present time there is no Subdivision Regulation Ordinance in Concord. Minimum standards for subdivision regulations are implemented through individual ordinances. A majority of the regulations are presently only matters of policy rather than law.

A potpourri of this type of subdivision regulation is very ineffective. It fails to include all of the controls necessary and renders it difficult to comply with those controls that do exist by individual ordinance. It should be possible for a subdivider to consult one comprehensive Subdivision Regulation Ordinance. This would obviate misunderstanding or oversight of individual ordinances.

A preliminary draft of a Subdivision Regulation Ordinance has been drafted and legislative approval should be forthcoming by the time the land development plan is adopted.

Zoning Regulations

Incorporated cities and towns are empowered by state law to enact zoning legislation for their respective municipalities.

Zoning is a process by which an area is divided into districts, within which the use of land and buildings, the height and bulk of buildings, the size of required yards and population density are regulated. The regulations may vary from district to district, but within each district they must be uniform. Zoning is one of the major legal devices by which a plan for a community's development may be effectuated.

A special purpose act provides for airport zoning by cities and counties to restrict the height of structures in aircraft land and take-off paths. Another authorizes cities and counties to zone areas subject to flooding and other natural disasters, so as to minimize damage therefrom.

No comprehensive and integrated Zoning Ordinance now exists in Concord. Since no Land Development Plan existed, the zoning has been of a piecemeal nature. The zoning practice has been to zone individual areas according to the predominant land use that happens to develop. This haphazard type of zoning has resulted in a waste of valuable land and the creation of poor land use relationships.

Mixed land uses have developed in the Concord area and there has been a tendency to compound this condition by granting variances too freely.

The final phase of the present contract between the City of Concord and the Division of Community Planning provides for the establishment of a Zoning Ordinance. This ordinance will be completed by November, 1965. It will be predicated on the Land Development Plan and with reasonable and diligent enforcement should make the Land Development Plan a living instrument.

It should be noted that the proposed Zoning Ordinance will not be retroactive. However, it will halt the present undesirable land use arrangements and permit the area to develop according to the hopes and desires of Concord citizens as reflected in the adopted Land Development Plan.

The extraterritorial jurisdiction for zoning, which extends one mile from the corporate limits, will also guide land development in those areas, which in all probability, will be annexed during the next twenty years.

Building and Housing Codes

Building codes define standards for structural strength, and establish codes for fire, safety, plumbing, and electrical installations. Generally, these regulations pertain to new structures rather than existing ones and as a consequence are ineffective in controlling blight in older neighborhoods.

Housing codes specify the minimum conditions of space per occupant, sanitary facilities, lighting, and heating. These codes apply to both new and existing housing.

The City of Concord presently has a Minimum Housing Code and a Building Code. A full-time inspector is responsible for the enforcement of both codes. This means that one inspector must maintain enforcement of structural standards for new structures, as well as minimum conditions for both new and existing structures.

It is suggested that the city be divided into eight or more sections and that an inspection be made of all existing structures each year. Should practice of this procedure prove that the burden of work is too great for one inspector, it would be advisable to consider employing another building inspector. Should a full-time inspector not be required, there is another technique that may be employed. The City of Dearborn, Michigan has utilized a program called "Operation Eyesore", which has proved highly effective. Each department head is instructed to make note of any sub-standard dwellings during the course of his duties. This information is then given to the building inspector who makes a detailed investigation. Need for enforcement of the Building Code is then determined in each individual case. This practice is only used as a supplement to the building inspector's duties.

It is suggested that the Building Code and Minimum Housing Code, which incorporates the Plumbing Code, Heating Code, Electrical Code and Fire Code, be reviewed every five years. The Building Code and Minimum Housing Code in Concord substantially consists of the minimum requirements as found in the North Carolina State Building Code. It is often desirable to upgrade these standards in certain respects and a periodical review allows for these amendments.

The State Board of Health has the responsibility of enforcing laws and regulations regarding the sanitation of public eating places. Plans and specifications for the development of construction of water supplies and sewage disposal facilities should be presented to the State Board of Health for approval. Although health laws and regulations are not considered a part of the North Carolina State Building Code, they are included here for informational purposes only. Reference to these laws and regulations should be included in the Building Code.

Public Housing Agency

State law authorizes municipalities to create local housing authorities. These local housing authorities both build and manage public housing projects. Public housing plays a major role in urban renewal areas.

Since an urban renewal program has been included in the Land Development Plan it would be advisable that a redevelopment commission be established as provided for under General Statutes of North Carolina, Chapter 160, Article 37. This commission may be created by the municipal legislative body to act as agent of the State or Federal government, or any of its instrumentalities or agencies, for the elimination of blight within the corporate limits of aforementioned municipality. Close cooperation between this commission and the Planning Board is imperative. The availability of housing for displaced persons in urban renewal areas and the selection of sites are two areas where the Planning Board can be of assistance. The actual selection of redevelopment sites are determined by the Planning Board as specified by the law.

Urban Renewal

North Carolina empowers any incorporated city or town to create an urban renewal commission. They may act as an agent of the Federal or State government or any of its instrumentalities or agencies to prepare and recommend redevelopment plans to the governing body of the municipality and to undertake and carry-out redevelopment projects within its jurisdiction.

The Housing Act of 1954 requires the formulation of a "workable program" as the first step in acquiring federal urban renewal assistance. The workable program has seven elements:

1. Adoption of adequate minimum standards of health, sanitation, and safety through a comprehensive system of codes and ordinances effectively enforced.
2. Formulation of a "comprehensive community plan" or a "general" plan implying long-range concepts and including land use, thoroughfare, and community facilities plans; a public improvements program; and zoning and subdivision regulations.

3. Identification of blighted neighborhoods and analysis for extent and intensity of blight and causes of deterioration, to aid in delin-eation for clearance or other remedial action.
4. Setting up an adequate organization, including legal authority to carry on the urban renewal program.
5. Development of means for meeting the financial obligations and requirements for carrying out the program.
6. Provision of decent, sanitary housing for all families displaced by urban renewal or other governmental activities.
7. Development of active citizen support and under-standing of the renewal program.

It is apparent that additional planning work is needed in Concord if they are to fulfill the requirements of the "workable program". The remaining studies required after completion of the present contract are a neighborhood analysis and a public improvements plan.

Any city that is dedicated to the elimination of slums and the prevention of blight should avail themselves of the planning techniques suggested whether or not they intend to receive federal aid in the immediate future.

The foregoing material has been a description of the major legal controls which may be exercised by a municipality. In addition to the legal controls there are private actions which can be instituted to effectively utilize the land development plan. Two of the most useful private action tools are:

Public Participation

Citizen support and concern can be one of the best allies in effectuating the fulfillment of a land development plan. All facets of the community should participate. Leaders of industry, professions, labor, welfare, religious and educational interests should be enlisted. Minority groups should be encouraged to manifest interest in planning programs for they often are the ones most vitally affected.

A continuous educational program should be conducted through the press, radio, television, and public meetings in order to apprise the public of community activities.

Public Works Expenditure Program

When long-term objectives have been determined and the need for services ascertained they should be formulated into a long-term operating expenditure budget with approximate estimates of the additional capital improvements that will be required if services are to be rendered in conformity with long-term objectives and need for services. A long-term expenditure budget is a form of policy statement reflecting the goals of the community. This type of budget also makes it possible to balance expenditures against future tax revenues. The long-term expenditure budget should be confined to general terms rather than a detailed itemization of expenditures.

A land development plan relates the various land uses one to the other and the financial prospects of the municipality should in turn relate to the development plan.

The City of Concord has already contracted with the Department of Conservation and Development, Division of Community Planning, to have subdivision regulations and a zoning ordinance instituted. These implementive tools will be completed by November, 1965, and will establish a solid foundation for a future master plan.

CONCLUSIONS

The general land development plan, which has been consummated, will act as a guide to the orderly development of Concord. Inherent in the plan is the promotion of the health, safety, welfare and convenience to the community. It has as its goal the charting of a course which will allow for the growth and change that will occur during the ensuing twenty years. It organizes and coordinates the various land use relationships within the community and expresses the desires and aspirations of the citizens. The general land development plan is an instrument that delineates the form of the city as desired and expressed by its inhabitants. It is a design for the physical, social, economic, and political framework of the city. It is the welding of the social, economic, and geographic properties of the city into one identifiable whole.

Although the four studies which will be completed by November, 1965, constitute a substantial portion of a comprehensive plan it by no means implies that the planning work for Concord has been concluded. Planning is a continuous process. A reevaluation of the plan must be made as time and events affect the community.

A truly comprehensive plan involves the individual study of component parts of the general plan. Some of the studies would investigate such factors as recreation, annexation, the central business district, community facilities, urban renewal, public improvements and capital budget, thoroughfares, neighborhood analysis and many others.

The most sorely needed study on the basis of priority is an annexation study. Many of the outlying areas from the corporate limits are growing rapidly. In addition, there will be some displacement of residents through a re-use of land and the deterioration of older homes. These factors will make it necessary to carefully analyze the practicability of annexation.

Planning suggests a goal of unity of purpose. Concord citizens have manifested an interest in rebuilding their city to desirable standards but the standards once achieved can only be maintained by the constant vigilance of all the citizens.

